

OBSERVATIONS OF COMETS IN GREEK AND ROMAN SOURCES BEFORE A.D. 410

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ABSTRACT

Unlike the ancient Chinese, the Greeks and Romans did not keep careful records of comet appearances; "scientific" study of comets was more or less restricted to speculation about their nature. The catalogue of observations presented in this article is compiled from allusions, often incidental, scattered throughout the corpus of Greek and Roman literature.

Si rarus et insolitae figurae ignis apparuit, nemo non scire quid sit cupit et, oblitus aliorum, de adventicio quaerit, ignarus utrum debeat mirari an timere.

"If this rare and strangely shaped fire appears everyone wants to know what it is and, forgetting everything else, seeks information about the strange visitor, uncertain whether it is to be marveled at or feared."

This passage from the opening words of *De Cometis*, the seventh book of Seneca's *Quaestiones Naturales*, written shortly after A.D. 60, no doubt reflects accurately the popular excitement caused by comets in the Graeco-Roman world, an excitement that was stimulated to no small degree by the notion that the comet was inevitably the presage of some cataclysmic event. This popular interest, however, was not matched by an equal scientific commitment to study them properly. There was, of course, a certain amount of philosophical speculation about their nature. Aristotle, in the first book of the *Meteorologica*, provides a summary of the theories of some of his predecessors: Anaxagoras and Democritus claimed that comets were a conjunction of planets that appear to touch each other; the Pythagoreans argued that the comet was an actual planet (literally, a "wandering" body), that did not rise far above the horizon and hence could not often be seen; Hippocrates of Chios also believed that the comet was a planet, but one that was not usually visible because of its proximity to the sun. Aristotle rejects these views for his own theory (*Met.* 344a–b): when the earth is heated by the sun it gives off an exhalation that produces a hot and dry level of air just below the level of heavenly bodies; comets, claims Aristotle, are caused by the combustion of this flammable material. Seneca, in the *Quaestiones Naturales* has preserved other theories, such as that of Epigenes (*Quaest. Nat.* 7.7.2), who held that comets were caused by whirlwind-induced fires, or of Apollonius of Myndos (*Quaest. Nat.* 7.17.1–3), who held that comets were distinctive heavenly bodies like the

sun or moon. Seneca's own view is that comets are composed of insubstantial fire.

What was needed, however, as Seneca points out, was a careful and sustained record of comet appearances. Unfortunately, no astronomer of first rank was interested in the project. Seneca notes that the study of comets was neglected by the Egyptians and completely ignored by astronomers of the status of Eudoxus and Conon (*Quaest.Nat.* 7.3). Apollonius of Myndus did indeed claim that the Chaldaeans (Babylonians) had conceived of comets as planets and had actually calculated their orbits, but Epigenes refuted this claim, asserting that the Chaldaeans had made no discoveries in this area (*Quaest.Nat.* 7.4.1); the Greeks tend to exaggerate out of all proportion the scientific achievements of the Near East, and Epigenes' scepticism is probably justified. This neglect of comet observations is all the more unfortunate in view of the fact that the Greeks (and Romans), by intellectual rather than empirical processes, broached the possibility that comets have "orbital motion" (see, for example, *Quaest.Nat.* 7.23.1: *ducere orbem*). The Pythagoreans seem to have believed this (*Met.* 342b), and Seneca himself argues that comets have wide orbits that are not restricted to the zone of the zodiac.

The situation in the Graeco-Roman world, then, was quite different from that of ancient China, where detailed observations of comets were made over a long period of time, and this means that the Greek and Roman information has to be assembled from a disparate collection of sources, historical, philosophical, ecclesiastical, or purely literary, in which, as often as not, the reference to the comet is quite incidental, mentioned only as a portent of some great historical event. This produces very serious difficulties of source evaluation. For a Greek or Roman (as well as for other mediterranean civilizations) it would be assumed that any great event would be preceded by, accompanied by or followed by heavenly signs; there would naturally be a great temptation to assume that such signs had manifested themselves even if accurate and reliable reports were lacking. The Roman historian Livy (21.62) refers to the problem in his account of the events of the year 218 B.C.: *Romae aut circum urbem multa ea hieme prodigia facta aut, quod evenire solet motis semel in religionem animis, multa nuntiata et temere credita sunt* ("In Rome or in the neighbourhood of the city many prodigies occurred that winter, or rather, as is wont to happen when men's minds are roused towards matters of faith, many were reported and too easily believed"). There is also the danger that where celestial phenomena have in fact occurred there will be a tendency to relate them to great events that were chronologically separate from them. It will be apparent that many of the comet observations recorded below are

associated with important historical events. This does not necessarily invalidate the observations but it should put us on our guard. In no other writer are these problems more acute than in the case of Livy, who died early in the first century A.D. (he wrote a history of Rome in 142 books). While he is essentially honest, he is prepared to accept sources without criticism and to believe the assertions of others without consulting the original documents. Another important source is Dio, who flourished about A.D. 200; he is not nearly as gullible as Livy, but, all the same, in many instances his references to comets, almost always included with other prodigies, must go back inevitably to popular sources. We are fortunate in the case of our three main sources of information; Aristotle (384–322 B.C.), Seneca (d. A.D. 65) and Pliny the Elder (d. A.D. 79) wrote specifically, and not merely incidentally, on comets and while their approach is not strictly scientific it is to some degree analytical.

An additional problem is that the language used to describe comets is often imprecise and ambiguous, and it is not always possible to determine exactly what celestial phenomenon is being described. Hence *fax* (literally, “torch”) is used in Livy where the description makes it almost certain that the reference is to a meteorite in one context, but leaves open the possibility of a reference to a comet in another context, and Pliny (*Historia Naturalis* 2.90) tells us that one type of comet was known as a *fax* because of its resemblance to a burning torch. Hence I have considered it necessary to quote the evidence from the original source in the case of each possible observation.

In preparing the following catalogue, I have made use of previous lists, which, in a sense, can be said to start with Aristotle. Comet lists are quite common from the sixteenth to the eighteenth centuries, but while these are of considerable antiquarian interest, they will be of little practical use to the astronomer without a training in the Classics since many of the observations noted do not appear in the original sources at all, and are merely based on the speculations of earlier scholars that comets would *probably* have been reported in connection with events of major significance. Moreover, the ancient sources are used quite uncritically. Johannes Hevelius, whose *Prodromus Cometicus* was published in 1665, begins his catalogue: *Anno Mundi 1656, triduo ante obitum Mathusalem, cometa in dodecatemorio Piscium a toto terrarum orbe conspectus est, qui 12 coeli signa unius mensis spatio percurrit dieque 16 Aprilis rursus evanuit. Post hunc Diluvium statim secutum ...* (“In the year of the world 1656, three days before the death of Methusaleh, a comet was seen throughout the world in the zodiacal division of Pisces; in the space of one month it traversed the 12 zodiac signs and then on April 16 disappeared again. The deluge followed

immediately after ...”). Even Pingré (1783), a scholar of some distinction, notes the comets seen during the sack of Troy and recorded by the ancient poets! Non-classicists who refer to the lists of Pingré and his predecessors are warned that the frequently cited “Lycosthenes” is not an ancient writer at all but a sixteenth-century German who filled up the gaps in the ancient source Obsequens and was for three centuries treated as an original authority. The most useful list forms part of an article in German on comets by Gundel (1921); I have added to Gundel’s list (although it is, of course, impossible to guarantee that the final result is complete) and have cited the ancient evidence and provided an English translation.

The following catalogue contains all the datable observations of comets in Greek and Roman sources of which I am aware; it goes down to A.D. 410, the date of the sack of Rome by Alaric. Note that the usual practice of Greek and Roman authorities is to date an event by reference to the chief magistrate holding office in any particular year. In Athens this would be the archon, and in Rome the consul (consuls were elected in pairs). Great difficulties arise in the dating of the Athenian archons for certain periods but fortunately for our purposes the fifth and fourth centuries B.C. (to which the references in the following list belong) present no serious difficulties. An alternative form of computation for the Greeks was by the Olympiad, a four-year cycle that begins in 776 B.C., the date on which the lists of victors in the Olympic Games begin. The Romans attempted to devise a similar system based on the foundation date of the city of Rome. Unfortunately there was no consensus on when precisely this was, and whenever the *ab urbe condita* (“from the founding of the city”) method is used, one must be careful to ascertain the foundation date accepted by the authority in question. The so-called “Varronian” system, based on a foundation date of April 21, 753, has won the widest acceptance.

Some corroboration of the Greek and Roman observations might be given by ancient Chinese observations of the same period, and I have noted where there appears to be a correspondence in the two groups of sources. The Chinese material is based on the list of Ho Peng Yoke (1962); in each case his name is followed by a reference, in [], to the appropriate item in his catalogue. It must be realized that as in the case of the Graeco-Roman sources it is not always possible to tell whether any particular reference in the Chinese records is to a comet or to some other celestial phenomenon.

Finally, I must stress that my purpose has been to provide information on one aspect of the history of ancient astronomy. This catalogue is not to be looked upon as a list of scientific data and the professional astronomer should approach it with great caution. Some of the observations recorded in Greek and Roman sources are almost certainly fictitious, and while

others might provide the astronomer with some corroborative evidence for cometary orbits, they should never be used as primary evidence.

The following abbreviations are used: Aristotle = Aristotle, *Meteorologica*, Pliny = Pliny, *Historia Naturalis*, Seneca = Seneca, *Quaestiones Naturales*. Other names that appear without titles cited are of authorities to whom only a single work has been attributed.

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THE CATALOGUE

No.	Date	Comments
1	B.C. 480	Pliny 2.90: <i>ceratias cornus speciem habet, qualis fuit cum Craecia apud Salamina depugnavit</i> (“the <i>ceratias</i> comet has the form of a horn, like the one that appeared when the Greeks fought the final battle at Salamis”).
2	467	<p>Aristotle, 344b: ὅτε ὁ ἐν Αἰγὸς ποταμοῖς ἔπεσε λίθος ἐκ τοῦ ἀέρος ... ἔτυχε δὲ καὶ τότε κομήτης ἀστὴρ γενόμενος ἀφ’ ἐσπέρας. (“when the stone fell from the sky at Aegospotami [a meteor said to have been foretold by Anaxagoras] ... a comet happened to appear at the same time in the west”).</p> <p>Pliny 2.149: <i>Olympiadis septuagesimae octavae secundo anno ... comete quoque illis noctibus flagrante</i> (“in the second year of the 78th Olympiad . . . [Anaxagoras foretold the fall of the meteor] in addition a comet blazed at night during that period”).</p> <p>Ho [13] notes a comet for 467; it is regarded as Halley’s comet.</p>
3	430	Manilius 1.884: <i>qualis Erechtheos pestis populata colonos</i> (“[comets are omens of disasters] such as the plague that ravaged the settlers of Erechtheus [i.e. the Athenians]”). This is the only reference to the appearance of a comet during the famous plague that broke out during the war between Athens and Sparta (mistakenly placed in 410 B.C. by Gundel (1921)). Manilius wrote a didactic poem on astrology in the early part of the first century A.D. He commits several inaccuracies, and this observation is highly suspect.
4	426	Aristotle 343b: ἐπὶ δ’ ἀρχοντος Ἐὐκλέους τοῦ Μόλωνος ἐγένετο κομήτης ἀστὴρ πρὸς ἄρκτον μηνὸς Γαμηλιῶνος περὶ τροπὰς ὄντος τοῦ ἡλίου χειμερινὰς (“when Euclees, son of Molon, was archon in Athens a comet appeared towards the north in the month of Gamelion [usually January-February] around the time of the winter solstice”).

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5	B.C. 373/2	<p>Aristotle 343b: ὁ τε γὰρ μέγας κομήτης ὁ γενόμενος περὶ τὸν ἐν Ἀχαιᾷ σεισμόν καὶ τὴν τοῦ κύματος ἔφοδον ἀπὸ δυσμῶν τῶν ἰσημερινῶν ἀνέσχεν ... ὁ μέγας ἀστὴρ περὶ οὗ πρότερον ἐμνήσθημεν ἐφάνη μὲν χειμῶνος ἐν πάγοις αἰθρίαις ἀφ' ἑσπέρας, ἐπὶ Ἀστέιου ἄρχοντος (“for the great comet that appeared at the time of the earthquake in Achaea and the tidal wave, rose in the area of the equinoctial sunset [west] . . . the great comet, mentioned earlier, appeared in the archonship of Asteius during the winter, in the west, when the weather was dry and frosty”).</p> <p>Seneca 7.5.3: <i>talem effigiem ignis longi fuisse Callisthenes tradit, antequam Burin et Helicen mare absconderet</i> (“Callisthenes says that such [i.e. like a beam] was the shape of the elongated fire, before the sea swallowed up Buris and Helice”).</p> <p>Seneca 7.16.2: <i>sicut hunc cometen . . . cum Helicen et Burin ortu suo mererit, ait ilico discessisse in duas stellas, quod praeter illum nemo tradidit</i> (“[Ephorus is often misleading] as when he says that the comet . . . noticed by all since it submerged Helice and Buris at its rising, immediately afterwards separated into two stars. No-one claims this apart from him”). Cf. no. 40.</p>
	372/1	<p>Diodorus Siculus, who flourished in the second half of the first century B.C. and wrote a world history culled from a wide variety of sources, assigns what is almost certainly the same comet to the following year (15.50): ἐπ' ἄρχοντος δ' Ἀθήνησιν Ἀλκισθένης ... ὥφθη μὲν γὰρ κατὰ τὸν οὐρανὸν ἐπὶ πολλὰς νύκτας λαμπὰς μεγάλη καιομένη, ἀπὸ τοῦ σχήματος ὀνομασθεῖσα πυρίνη δοκίς (“when Alcisthenes was archon in Athens . . . a great blazing torch was seen in the sky for many nights, called, after its shape, a ‘blazing beam’ ”).</p>
6	345/4	<p>Diodorus Siculus 16.66.3: δι' ὅλης γὰρ τῆς νυκτὸς προηγέτο λαμπὰς καιομένη κατὰ τὸν οὐρανόν (“[during the archonship of Eubulus, while Timoleon was <i>en route</i> for Sicily] a torch blazing through the whole night preceded him”). Diodorus' information</p>

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	B.C.	<p>probably came from Timaeus (356–260) or Theopompus (born about 378) who would have lived close to the events.</p> <p>There may be a confirmation of this observation in Pliny 2.90: <i>semel adhuc iubae effigies mutata in hastam est</i> (“up to now it has happened once that a comet in the form of a mane has changed into one in the form of a spear”). The problem is that Pliny’s date, given both as an Olympiad and <i>ab urbe condita</i>, is confused. Some manuscripts give Olympiad 108 (348–5 B.C.), others Olympiad 109 (344–1 B.C.) or Olympiad 105 (360–57 B.C.). The manuscripts read <i>AUC</i> 398 (356 B.C. in the Varronian scheme), which corresponds to none of the Olympiad dates, and this is generally emended to <i>AUC</i> 408 (346 B.C.).</p>
7	341/0	<p>Aristotle, 345a: ἔτι δ’ ἐπ’ ἀρχοντος Νικομάχου ἐγένετο ὀλίγας ἡμέρας κομήτης περὶ τὸν ἰσημερινὸν κύκλον (“moreover, in the archonship of Nicomachus a comet appeared for a few days in the equinoctial zone”).</p>
8	303/2	<p>The Parian Marble is a marble stele on which a series of events is recorded starting from Cecrops, legendary king of Athens, and going down to the archonship of Diognetus (264/3 B.C.). Under the archonship of Leostratus (303/2) the marble, as restored, reads: κομήτης ἀσ]τήρ ἐφάνη (“a comet appeared”).</p> <p>Ho [17] notes a comet for 303 B.C.</p>
9	216	<p>Silius Italicus 8.636–7: <i>non unus crine corusco/ regnorum eversor, rubuit letale cometes</i> (“many a comet with bright tresses, destroyer of kingdoms, gleamed red and deadly”). Silius Italicus (A.D. 26–101) wrote a poem, the <i>Punica</i>, on the war with Hannibal. The above lines come from the description of the portents before the battle of Cannae. The observation is not recorded elsewhere, and is suspect.</p>

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10	B.C. 204	<p>Livy 29.14.3: <i>et facem Setiae ab ortu solis ad occidentem porrigi visam</i> (“at Setia a torch was seen to be stretched out from the east to the west”). The ambiguity of the term <i>fax</i> in Livy was noted in the introduction. It should also be noted that the celestial phenomena recorded by Livy were in most cases not observed generally but reported from one particular locality; it is unlikely that Livy made serious efforts to seek documentary confirmation of the observations, and they are to be treated with caution.</p> <p>Ho [23] notes that a comet was observed for ten days between August 14 and September 11 in this year.</p>
11	203	Livy 30.2.11: <i>Anagniae sparsi primum ignes in caelo dein fax ingens arsit</i> (“at Anagnia there were at first scattered fires in the sky, then a huge torch blazed”).
12	176	Livy 41.16.6: <i>Tusculi facem in caelo visam</i> (“at Tusculum a torch was seen in the sky”).
13	174	Livy 41.21.13: <i>tres simul soles effulserunt et faces eadem nocte plures per caelum lapsae sunt</i> (“three suns shone at once and that night several torches fell through the sky”). <i>Faces</i> probably refers here to a meteor shower.
14	169	Livy 43.13.3: <i>Anagnia duo prodigia eo anno sunt nuntiata, facem in caelo conspectam</i> (“at Anagnia two prodigies were reported in that year, a torch seen in the sky ...”).
15	168	Seneca 1.1.2: <i>talis enim fuit forma eius [i.e. globus ignis] qui bellum adversus Persen Paulo gerente lunari magnitudine apparuit</i> (“such was the form of that phenomenon [i.e. a ball of fire] that appeared, as large as the moon, while Paulus was waging war

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	B.C.	<p>against Perseus"). This passage occurs during a discussion of a type of meteor to which Aristotle gave the name of "she-goat"; it is just possible that the phenomenon is a comet, but Bicknell (1977) argues that it is a fireball, whose angular diameter can appear to be equal to the moon as seen with the naked eye. No mention of either meteor or comet is made elsewhere in connection with the battle of Pydna; Cicero and Livy tell of an eclipse of the moon.</p>
16	167	<p>Livy 45.16.5: <i>Lanuvi fax in caelo visa est</i> ("at Lanuvium a torch was seen in the sky").</p> <p>Obsequens 11: <i>Lanuvi fax ardens in caelo visa</i> ("at Lanuvium a blazing torch was seen in the sky"). Julius Obsequens wrote, probably in the fourth century, tables of prodigies from 249 to 12 B.C. He is quite uncritical and indiscriminating in the material that he admits.</p>
17	166	<p>Obsequens 12: <i>Lanuvii fax in caelo nocte conspecta</i> ("at Lanuvium a torch was seen in the sky at night").</p>
18	163	<p>Obsequens 14: <i>Capuae nocte sol visus</i> ("at Capua the sun was seen at night"). Gundel (1921) suggests that this may have been Halley's comet.</p>
19	147	<p>Seneca 7.15.1: <i>post mortem Demetrii Syriae regis ... paulo ante Achaicum bellum cometes effulsit non minor sole. primo igneus ac rubicundus orbis fuit clarumque lumen emittens, quanto vinceret noctem; deinde paulatim magnitudo eius districta est et evanuit claritas; novissime totus intercidit</i> ("after the death of Demetrius, king of Syria ... a little before the Achaean war [146 B.C.] a comet shone no smaller than the sun; at first its orb was red and fiery, emitting clear light, enough to dispel the darkness of night, then gradually its size was spread out and its clarity vanished, and finally it disappeared completely").</p>

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	B.C.	<p>Obsequens 20: <i>stella arsit per dies triginta duos</i> (“a star blazed for thirty-two days”).</p> <p>Ho [31–3] lists three comets for this year: (i) seen from May 13–28, (ii) seen from August 6–16, (iii) seen in October, duration unknown.</p>
20	137	<p>Seneca, 7.15.2: <i>Attalo regnante initio cometes modicus apparuit; dein sustulit se diffuditque et usque in aequinoctialem circumum venit, ita ut illam plagam caeli cui lactea nomen est in immensum extentus aequaret</i> (“at the beginning of Attalus’ reign a comet appeared, of moderate size at first, then it raised itself and spread out and reached right to the equinoctial circle [equator] so that stretched out into unlimited size it equalled the region of the sky called the Milky Way”).</p> <p>Obsequens 24: <i>Praeneste fax ardens in caelo visa, sereno intonuit</i> (“at Praeneste a blazing torch was seen in the sky, and it thundered during fine weather”). Obsequens’ account perhaps suits a fireball rather than a comet.</p> <p>Ho [37] records a comet seen in the north-east between September 21 and October 20.</p>
21	134	<p>Justinus 37.2.1: <i>huius futuram magnitudinem etiam caelestia ostenta praedixerant. nam et eo quo genitus est anno et eo quo regnare primum coepit stella cometes per utrumque tempus LXX dies ita luxit ut caelum omne conflagrare videretur</i> (“heavenly phenomena had also predicted the greatness of this man [Mithridates]. For both in the year in which he was born and in the year in which he began to reign a comet shone through both periods for 70 days in such a way that the whole sky seemed to be ablaze”). This information comes to us indirectly. Justinus, who probably lived in the third century A.D. made an epitome of the <i>Historiae Philippicae</i> of Pompeius Trogus, an historian of the Augustan period, who in turn used the <i>History of Kings</i> of Timagenes of Alexandria, who came to Rome in 55 B.C.</p>

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	B.C.	Obsequens 27: <i>in Amiterno sol noctu visus, eiusque lux aliquamdiu fuit visa</i> ("in Amiternum the sun was seen at night and its light was visible for some time").
22	119	Justinus 37.2.1 (see no. 21). Ho [43] notes a comet in the north-west seen between May 8 and June 6.
23	106	Obsequens 41: <i>Romae interdiu fax sublime volans conspecta</i> ("at Rome a torch flying high in the sky was seen").
24	100	Obsequens 45: <i>fax ardens Tarquiniis late visa subito lapsu cadens. sub occasu solis orbis clipei similis ab occidente ad orientem visus perferri</i> ("a blazing torch was seen far and wide at Tarquini falling in swift descent. At the setting of the sun a disc similar in shape to a shield was seen to be carried from the west to the east").
25	94	Obsequens 51: <i>fax in caelo apparuit</i> ("a torch appeared in the sky"). Seneca 7.20.4: <i>quo deficiente quondam cometen apparuisse, quem sol vicinus obtexerat Posidonius tradit</i> ("Posidonius reports that once during an eclipse a comet appeared that the nearby sun had concealed"). Seneca's words seem to imply that Posidonius had observed the phenomena personally, and it is generally assumed that the eclipse of the sun must be the partial eclipse of 94 B.C. However, Posidonius was born about 130 B.C., and there are two other solar eclipses visible in the Mediterranean computed by Oppolzer (1887) that he might have observed, in 115 and 103 B.C.
26	92	Obsequens 53: <i>fax in caelo visa</i> ("[at Faesulae] a torch was seen in the sky").

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	(91)	<p>Obsequens 54: <i>sub ortu solis globus ignis a septentrionali regione cum ingenti sono caeli emicuit</i> ("about sunrise a ball of fire flashed forth from the north to the accompaniment of a great noise in the sky").</p> <p>Orosius, <i>adv. Paganos</i> 5.18.3: <i>eo accessit, ut maestam urbem prodigia dira terrerent. nam sub ortu solis globus ignis a regione septentrionis cum maximo caeli fragore emicuit</i> ("it happened besides that terrible prodigies terrified the mournful city; for at sunrise a globe of fire broke forth from the region of the north to the accompaniment of a very loud crash in the sky"). Orosius, who lived in the early fifth century, seems to have drawn his information from Obsequens or from a common source. Gundel (1921) considers that the phenomenon described could be a bright comet, but a fireball seems a more likely candidate.</p>
27	87	<p>Cicero, <i>de Natura Deorum</i> 2.14: <i>quae nuper bello Octaviano magnarum fuerunt calamitatum praenuntiae</i> ("[comets] that recently in the Octavian war predicted great calamities").</p> <p>Pliny, 2.92: <i>sed cometes nonnumquam in occasura parte caeli est ... ut civili motu Octavi consule iterumque Pompei et Caesaris bello</i> ("but sometimes a comet appears in the western sky ... as in the civil disturbances when Octavius was consul and again during the war between Pompey and Caesar").</p> <p>Ho [47] notes a comet seen in the <i>east</i> between August 10 and September 8. Ho considers that this was probably Halley's comet, placed, however, in 86 B.C. by Marsden (1972).</p>
28	76	<p>Pliny 2.100: <i>scintillam visam e stella cadere et augeri terrae adpropinquantem, at postquam lunae magnitudine facta sit, inluxisse ceu nubilo die, dein, cum in caelum se reciperet, lampadem factam semel umquam proditur Cn. Octavio C. Scribonio consulibus. vidit id Silanus proconsul cum comitatu suo</i> ("during the consulship of Gnaeus Octavius and Gaius Scribonius a spark</p>

No.	Date	Comments
	B.C.	<p>was seen to fall from a star and to grow as it approached the earth; it afterwards became as large as the moon and was seen to shine as if with a misty daylight, then, when it had returned to the sky, it changed into a torch. It is recorded only once; it was seen by the proconsul Silanus and his entourage”).</p> <p>Ho [51] reports a “candle star” that appeared between May 12 and June 9. It is identified as either a comet or a nova.</p>
29	63	Obsequens 61: <i>trabis ardens ab occasu ad caelum extenta</i> (“a burning beam stretched out from the west to the sky”).
30	56	Dio 39.20.1: <i>καὶ λαμπὰς ἀπὸ τῆς μεσημβρίας ὁρμηθεῖσα πρὸς βορρᾶν διῆξε</i> ... (“and a torch rising from the south moved quickly towards the north”). This is included among the portents that occurred during the political crisis caused in Rome by the clashes between the supporters of Caesar and Pompey.
31	52	Dio 40.47.2: <i>λαμπὰς ἐκ τῶν νοτίων πρὸς ἀνατολὰς διέδραμε</i> (“a torch moved quickly from the south to the east”). This was one of the signs of divine displeasure at the deteriorating political situation in Rome.
32	49	<p>Dio 41.14.3: <i>πῦρ τε ἀπὸ δυσμῶν πρὸς ἀνατολὰς διῆξε</i> (“fire darted from west to east”). This was one of the portents of the defeat of Pompey.</p> <p>Ho [56] records an observation made between April 14 and May 12, which may, however, be of a nova.</p>
33	48	<p>Pliny 2.92 (see no. 27).</p> <p>Lucan 1.528–9: <i>obliquas per inane faces crinemque timendi/sideris et terris mutantem regna cometen</i> (“one saw torches</p>

No.	Date	Comments
34	B.C.	<p>flying across the empty sky and the hair of the terrible star and the comet that changes kingdoms on earth"). Lucan (A.D. 39–65) wrote the <i>Pharsalia</i> on the civil war between Caesar and Pompey; he is very prone to rhetorical exaggeration.</p> <p>Ho [57] reports a “guest star” seen in May of this year (probably a nova).</p>
	44	<p>This is the most famous comet observation of the ancient world. The <i>sidus Iulium</i> that appeared after the death of Caesar was taken to represent the murdered dictator’s reception into heaven. For a general discussion of the event, see Bömer (1952), and for the depiction of the comet on coins of the Augustan period, see Gardthausen (1891).</p> <p>Seneca 7.17.2: [<i>cometes</i>] <i>qui post excessum divi Iulii ludis Veneris Genetricis circa undecimam horam diei emersit</i> (“[the comet] that appeared after the death of divine Julius during the games of Venus Genetrix about the eleventh hour of the day”).</p> <p>Suetonius, <i>Caesar</i> 88: <i>stella crinita per septem continuos dies fulsit exoriens circa undecimam horam</i> (“[during the games] a comet shone for seven continuous days, rising about the eleventh hour”).</p> <p>Pliny 2.93: [<i>cometes</i>] <i>qui incipiente eo apparuit ludis quos faciebat Veneri Genetrici non multo post obitum patris Caesaris</i> (“[the comet] that appeared at the beginning of his reign [i.e. Augustus’] at the games that he was holding for Venus Genetrix not long after the death of Caesar, his father”).</p> <p>Plutarch, <i>Caesar</i> 69.3: τῶν δὲ θείων ὃ τε μέγας κομήτης (ἐφάνη γὰρ ἐπὶ νύκτας ἑπτὰ μετὰ τὴν Καίσαρος σφαγὴν διαπρεπὴς εἶτα ἠφανίσθη) (“among the divine portents there was also the great comet; it appeared very bright for seven nights after the murder of Caesar, then disappeared”).</p>

No.	Date	Comments
	B.C.	<p>Dio 45.7.1: ἐπεὶ μέντοι ἄστρον τι παρὰ πάσας τὰς ἡμέρας ἐκείνας ἐκ τῆς ἄρκτου πρὸς ἐσπέραν ἐξεφάνη, καὶ αὐτὸ κομήτην τέ τινων καλούντων (“but when a certain star appeared during all those days in the north towards evening, some calling it a comet ...”).</p> <p>Calpurnius Siculus 1.83: <i>cum Caesare raptō/ indixit miseris fatalia civibus arma</i> (“when, on the murder of Caesar, a comet pronounced fatal war for the wretched people”).</p> <p>Obsequens 68: <i>stella per dies septem insignis arsit</i> (“a bright star blazed for seven days”).</p> <p>Servius, on <i>Aeneid</i> 8.681: <i>per triduum stella apparuit in septentrione</i> (“for three days a star appeared in the north”).</p> <p>Servius, on <i>Eclogue</i> 9.46: <i>Baebius Macer circa horam octavam stellam amplissimam, quasi lemniscis, radiis coronatam, ortam dicit</i> (“Baebius Macer says that about the eighth hour a very large star, covered with ribbon-like rays, rose in the north”).</p> <p>Ho [59] notes a comet seen in the north-west between May 18 and June 16.</p>
35	43	<p>Dio 45.17.4: λαμπὰς ἀπ’ ἀνίσχοντος ἡλίου πρὸς δυσμὰς διέδραμε, καὶ τις ἀστήρ καινὸς ἐπὶ πολλὰς ἡμέρας ὤφθη (“a torch moved quickly from east to west and a new star could be seen for several days”). This was included among the portents of the civil war that followed the death of Caesar. Octavian, the future emperor Augustus, was suffect consul in the second half of this year; the reference in Pliny (see no. 27) may in fact be to this comet.</p>
36	42	<p>Dio 47.40.2: ὃ τε ἥλιος ... ποτὲ καὶ νυκτὸς ἐξέλαμψε (“the sun ... even shone once at night”). This is included among the portents of the battle of Philippi. It is referred to in two Latin poetic texts; Vergil (70–19 B.C.) was a contemporary of the battle.</p>

No.	Date	Comments
	B.C.	<p>Vergil, <i>Georgic</i> 1.488–9: <i>non alias ... totiens arsere cometae</i> (“on no other occasion did the dreadful comets blaze so often”).</p> <p>Manilius 1.907–8: <i>nec plura alias incendia mundus/sustinuit quam cum ...</i> (“the world did not on any other occasion endure more blazing comets than [at the battle of Philippi]”).</p>
37	31	Dio 50.8.2: καὶ λαμπὰς ἐπὶ πολλὰς ἡμέρας ὑπὲρ τῆς Ἑλληνικῆς θαλάσσης αἰωρηθεῖσα ἐς τὸν αἰθέρα ἀνέδραμε (“and for many days a torch rising over the sea in the direction of Greece moved quickly up into the sky”). The reference occurs during the portents that preceded the battle of Actium.
38	30	Dio 51.17.5: καὶ τούτῳ καὶ ἀστέρες κομήται ἐωρῶντο (“in the meantime comets also were seen ...”). This is one of the several portents that followed the death of Cleopatra.
39	17	<p>Dio 54.19.7: λαμπὰς τέ τις ἀπὸ μεσημβρίας ἐπὶ τὴν ἄρκτον διὰ πάσης τῆς νυκτὸς ἠνέχθη (“and a kind of torch rose up all night from the south towards the north”). This is included among the portents that preceded Augustus’ departure for Gaul, and might appropriately be placed in 16 B.C. except that it refers clearly to the same phenomenon recorded by Obsequens for 17 B.C.</p> <p>Obsequens 71: <i>fax caelestis a meridiano ad septentrionem extenta luci diurnae similem noctem fecit</i> (“a torch in the sky, stretched out from the south to the north, made night similar to the light of day”).</p>
40	12	Dio 54.29.8: τό τε ἄστρον ὃ κομήτης ὠνομασμένος ἐπὶ πολλὰς ἡμέρας ὑπὲρ αὐτοῦ τοῦ ἄστεως αἰωρηθεὶς ἐς λαμπάδας διλύθη (“the star called the comet after rising over Rome for several days was broken up into flashes”). This, among other portents, marks the

No.	Date	Comments
	B.C.	<p>death of Agrippa and so must belong to 12 B.C., not, as Gundel (1921) suggests, 11 B.C.</p> <p>Ho [61] records a comet that rose on August 26 and lasted 56 days.</p>
41	A.D. 9	<p>Manilius 1.899–900: <i>cum fera ductorem rapuit Germania/ Varum infecitque trium legionum sanguine campos</i> (“[comets are bad omens, as] when fierce Germany carried off Varus the commander and stained the plains with the blood of three legions”).</p> <p>Dio 56.24.4: ἀστέρες τε κομήται συχνοὶ ἅμα κατεφαίνοντο (“and several comets appeared at the same time ...”). Dio is writing of the portents that occurred before and after the defeat of Varus in Germany.</p>
42	14	<p>Dio 56.29.3: καὶ ἀστέρες κομήται καὶ αἱματώδεις ὥφθησαν (“and comets the colour of blood were seen”). This is one of the portents that preceded the death of Augustus.</p>
43	54	<p>Pliny 2.92: <i>sed cometes nonnumquam in occasura parte caeli est ... in nostro vero aevo circa veneficium quo Claudius Caesar imperium reliquit Domitioni Neroni</i> (“but sometimes a comet appears in the western sky ... in our own day about the time of the poisoning through which Claudius Caesar left the empire to Domitius Nero”).</p> <p>Suetonius, <i>Claudius</i> 46: <i>exortus crinitae stellae</i> (“[one omen of Claudius’ death was] the rising of a comet”).</p> <p>Dio, <i>Epitome</i> of 61.35.1: ἐς τοῦτό τε ὃ τε ἀστὴρ ὁ κομήτης ἐπὶ πλείστον ὀφθαίς ... ἔδοξε σημῆναι (“the comet seen for a very long time .. seemed to refer to this”). This passage comes from an epitome of Dio made in the eleventh century by Xiphilinus.</p>

No.	Date	Comments
44	A.D.	<p>Seneca, 7.17.2, alludes to a comet that appeared under Claudius but does not assign any date. It is presumably the one observed at the time of his death. Seneca later adds descriptions: (7.21.3) <i>ille enim a septentrione in verticem surgens orientem petiit semper obscurior</i> (“for that one rising from the north to the zenith headed to the east, growing duller and duller”); (7.29.3) <i>a septentione primum visus, non desiit in rectum assidue celsior celsior ferri, donec excessit</i> (“first seen in the north, it moved continually higher in a straight line until it disappeared”).</p> <p>Ho [70] notes a comet that rose on June 9 and was visible for 31 days.</p> <p>Seneca, 7.28.3: <i>hic cometes qui Paterculo et Vopisco consulibus apparuit</i> (“this comet that appeared in the consulship of Paterculus and Vopiscus”). Seneca makes other references to a comet seen under Nero, presumably that of A.D. 60: (7.21.3) <i>sex enim mensibus hic quem nos Neronis principatu laetissimo vidimus spectandum se praebuit</i> (“this one that we saw in the happy principate of Nero presented itself for view for six months”); (7.29.2–3) <i>intra sextum mensem dimidiam partem caeli transcurrit hic proximus ... a septentrione motus sui initium fecit et per occidentem in meridiana pervenit erigensque cursum suum oblituit</i> (“the most recent traversed half of the sky in less than six months ... it began its motion in the north and moved to the south passing through the west, and rising up disappeared”).</p> <p>Tacitus, <i>Annals</i> 14.22: <i>inter quae sidus cometes effulsit</i> (“in the course of these events a comet shone forth”). Tacitus is here describing the events of A.D. 60.</p> <p><i>Octavia</i> 231–2: <i>ardens vidimus caelo iubar cometam pandere infestam facem, / qua plaustra tardus noctis aeterna vice regit Bootes</i> (“we have seen a comet, a blazing radiance in the sky, spread out its hostile torch where slow Boötes guides his wagon in the endless turning of the night”). The <i>Octavia</i>, wrongly ascribed by some to Seneca, has as its dramatic setting the year A.D. 62.</p>

No.	Date	Comments
	A.D.	<p>Calpurnius Siculus 1.77–9: <i>cernitis ut puro nox iam vicesima caelo/ fulgeat et placida radiantem luce cometem/ proferat</i> (“do you see how in the clear sky the night is gleaming for the twentieth time, and brings forth a comet shining in its gentle light”). Calpurnius Siculus flourished between A.D. 50 and 60. He wrote a collection of <i>Eclogues</i>; this reference may be to the comet of A.D. 54, but Toynbee (1942) has argued that the <i>Eclogue</i> was written in A.D. 60.</p> <p>Ho [73] records a comet that rose on August 9 and was visible for 135 days.</p>
45	64	<p>Tacitus, <i>Annals</i> 15.47: <i>fine anni vulgantur prodigia ... et sidus cometes, sanguine inlustri Neroni expiatum</i> (“at the end of the year portents were reported ... and a comet, always expiated by Nero by noble blood”).</p> <p>Suetonius, <i>Nero</i> 36: <i>stella crinita ... per continuas noctes oriri coeperat</i> (“a comet ... began to rise on successive nights”). Suetonius’ reference is undated but since he goes on to say that the appearance was followed by the murder of leading Romans, it seems that he is describing the events related in the preceding passage of Tacitus.</p> <p>Pliny (2.92), without giving a date, refers to a comet that appeared under Nero: <i>adsidium prope ac saevum</i> (“fierce and almost continuous”). On the basis of the <i>semper</i> (“always”) of Tacitus, and the <i>adsidium prope</i> (“almost continuous”) of Pliny, Rogers (1953) sees hidden allusions to other comets seen in this general period and mentioned in Chinese records.</p> <p>Ho [75] notes a “guest star” that appeared on May 3 and lasted 75 days. “Guest stars” are usually taken as novae or variable stars, and in any case it is too early in the year to be the comet mentioned in Tacitus.</p>
46	69	<p>Dio 64.8.1: <i>καὶ γὰρ κομήτης ἀστὴρ ἐφαντάσθη</i> (“a comet also appeared”). Dio is describing the portents that preceded the</p>

No.	Date	Comments
	A.D.	<p>rebellion of Vespasian against Vitellius. For Josephus the comet was one of the omens of the destruction of Jerusalem.</p> <p>Josephus, <i>Jewish War</i> 6.289: τοῦτο μὲν ὅτε ὑπὲρ τὴν πόλιν ἄστρον ἔστη ῥομφαία παραπλήσιον καὶ παρατείνας ἐπ' ἐνιαυτὸν κομήτης (“such as when a star resembling a sword stood over the city, and a comet that extended for a year”). Josephus, a Jewish writer, was a contemporary of the events described. His description is repeated almost verbatim by later ecclesiastical writers (Hegesippus, 5.44.1; Eusebius, <i>Ecclesiastical History</i> 3.8.2; Zonaras, 6.24B).</p>
47	76	<p>Pliny 2.89: <i>acontiae iaculi modo vibrantur, atrocissimo significatu: haec fuit de qua quinto consulatu suo Titus Imperator Caesar praeclaro carmine perscripsit, ad hunc diem novissime visa</i> (“‘javelin’ comets quiver like a spear [they are a terrible portent]; such was the one about which Titus in his fifth consulship wrote his famous poem. Up to now it is the last time that this type has been seen”).</p> <p>Ho [82] records a comet that appeared on October 7 and lasted for 40 days.</p>
48	79	<p>Dio 66.17.2: ὁ τε ἀστήρ ὁ κομήτης ἐπὶ πολὺ φαντασθεῖς (“and a comet that appeared for a long time”). Dio includes this among the portents of Vespasian’s death; Suetonius also refers to it.</p> <p>Suetonius, <i>Vespasian</i> 23.4: <i>et stella crinita in caelo apparuisset</i> (“and a comet had appeared in the sky”).</p> <p>Aurelius Victor 9: <i>quippe primo cum crinitum sidus apparuisset: “Istud,” inquit, “ad regem Persarum pertinet”</i> (“indeed, when the tressed star first appeared, he said, ‘That omen refers to the king of the Persians’ ”). Aurelius Victor wrote in the second half of the fourth century, and relies heavily on Suetonius. “Cometes” means “long-haired” in Greek; the witticism revolves around the fact that Persian kings wore their hair long while Vespasian was bald.</p>

No.	Date	Comments
	A.D.	Ho [84] notes a comet that rose in April and lasted for 20 days.
	(115)	Juvenal 6.407: <i>instantem regi Armenio Parthoque cometen/ prima videt</i> ("she is the first to see the comet that is threatening the Armenian and the Parthian king"). Following Friedlaender (1895), Gundel (1921) assumes that this is a reference to Trajan's campaign against Armenia and Parthia. But Juvenal is merely describing the gossiping woman who knows everything that is going on, and the reference is almost certainly to comets in general.
49	130	Dio 69.11.4: καὶ τέλος ἀστέρα τινα αὐτός τε ὁρᾶν ὡς καὶ τοῦ Ἀντινόου ὄντα ἔλεγε ... ἐκ τε τῆς ψυχῆς τοῦ Ἀντινόου ὄντως τον ἀστέρα γεγενῆσθαι καὶ τότε πρῶτον ἀναπεφηνέναι ("and finally he [Hadrian] claimed that he saw a star that he took to be the star of Antinous [and that he believed] that the star had come about from the spirit of Antinous and had appeared then for the first time"). This may be a reference to a nova rather than to a comet.
50	141?	<i>Historia Augusta</i> 9.3: <i>apparuit et stella crinita</i> ("a comet also appeared"). The <i>Historia Augusta</i> is a collection of the lives of 30 Roman emperors. The above reference is included among the prodigies of Antoninus Pius' reign: it is undated, but may be Halley's comet, which appeared in this year. Ho [100] reports a comet that rose on March 27. It is probably Halley's.
51	162	Cassiodorus, <i>Chronica</i> (Mommsen, <i>Chronica Minora</i> II.143): <i>Lucio Caesari Athenis sacrificanti ignis in caelo ab occidente in orientem ferri visus est</i> ("while Lucius Caesar was sacrificing in Athens a fire was seen to be carried in the sky from west to east"). The observation is suspect. Cassiodorus wrote his chronicle in the sixth century, and is often seen to be in error.
52	200	Dio 76.16.5: ὥφθη δὲ ἐπὶ πολλὰς ἡμέρας καὶ κομήτης ἀστήρ ἐν τῇ

No.	Date	Comments
	A.D.	<p>ῥώμη (“a comet was seen in Rome for many days”). This is included among the portents of the death of Severus.</p> <p>Ho [115] reports a comet that rose on November 6.</p>
53	218	<p>Dio 79.30.1: καὶ ὁ ἀστὴρ ὁ κομήτης ἐπὶ πλεῖον ὥφθη, ἕτερον τέ τι ἄστρον ἀπὸ δυσμῶν πρὸς ἀνατολὰς τὸ ἀκροφύσιον ἐπὶ πολλὰς νύκτας ἀνατείνον δεινῶς ἡμᾶς ἐξετάραττεν (“a comet was seen for a long time, and another star, whose tail was stretched out from the west to the east for several nights caused us great panic”). This takes place before the revolt of Macrinus.</p> <p>Ho [122] reports a comet that rose between April 13 and May 12. This was probably Halley’s, whose perihelion date was May 18.</p>
54	336	<p>Eutropius 10.8.2: <i>denuntiata mors eius etiam per crinitam stellam, quae inusitatae magnitudinis aliquamdiu fulsit, eam Graeci κομήτην vocant</i> (“his [Constantine’s] death was also announced by a ‘tressed star’, which, being of unusual size, shone for some time; the Greeks call it a comet”). Eutropius wrote in the second half of the fourth century.</p> <p>Theophanes, <i>Chronographia</i> AM 5286: καὶ ἐφάνη ἐν Ἀντιοχείᾳ ἐν ἡμέρᾳ ἐν τῷ οὐρανῷ κατὰ τὸ ἀνατολικὸν μέρος καπνίζων σφόδρα ὡς ἀπὸ καμίνου, ἀπὸ ὥρας τρίτης ἕως ὥρας πέμπτης (“and in the day-time a star appeared in Antioch in the eastern sky from the third to the fifth hour, smoking heavily as if from a furnace”). Theophanes, who lived in the eighth century, assigns this portent to the 30th year of Constantine’s reign.</p> <p>Ho [168] reports a comet that rose on February 16.</p>
55	363	<p>Ammianus 25.10.2: <i>et visa sunt interdium sidera cometarum</i> (“and during the day comets were seen”). Ammianus, the historian, was born about A.D. 330 and so was a contemporary of the</p>

No.	Date	Comments
	A.D.	<p>events described. This comet is one of the portents of the death of Jovian.</p> <p>Ho [173] reports a comet that was seen between August 26 and September 23.</p>
56	364	Ammianus 30.5.16: <i>arsere crinita sidera cometarum</i> (“comets blazed”). This happened before the death of Valentinian.
57	389	<p>Philostorgius, <i>Ecclesiastical History</i> 10.9: ἀστηρ κατὰ τὸν οὐρανὸν ὥφθη παράδοξος καὶ ἀήθης ... ἐξέλαμψεν δὲ πρῶτον κατὰ μέσας νύκτας πλησίον τοῦ Ἑωσφόρου κατ’ αὐτὸν δὴ τὸν καλούμενον ζῳδιακὸν κύκλον (“a strange and unusual star was seen in the sky ... it shone at first in the middle of the night near Venus in the east in what they call the zone of the zodiac”). Philostorgius wrote between 368 and 439 and was thus a contemporary of the event.</p> <p>Marcellinus, <i>Chronica</i> (Mommsen, <i>Chronica Minora</i> II.62): <i>stella a septentrione gallicinio surgens et in modum luciferi ardens potius quam splendens apparuit, vicensimo sexto die esse desiit</i> (“a star rising in the north-east and blazing in the manner of Venus, rather than gleaming, made its appearance, and on the twenty-sixth day ceased to be”). The precise information given by Philostorgius and Marcellinus adds weight to this reported observation.</p>
58	390	Marcellinus, <i>Chronica</i> : <i>signum in caelo quasi columna pendens ardensque per dies triginta apparuit</i> (“a sign appeared in the sky hanging like a column and blazing for thirty days”).
59	393	Claudian, <i>Fourth Consulship of Honorius</i> 184–6: <i>visa etiam medio populis mirantibus audax/ stella die dubitanda nihil nec crine retuso / languida</i> (“a star was seen at mid-day by a marvelling

No.	Date	Comments
	A.D.	<p>people, clear and unmistakable, not dim with stunted ray”). Claudian, who wrote about A.D. 400, dates this phenomenon to Honorius’ elevation to the rank of Augustus, on November 20, 393 (Gundel (1921) gives a date of 398).</p> <p>Ho [179] reports a “guest star” that appeared between February 27 and March 28 and disappeared between October 22 and November 19. Gundel (1921) suggests that the observation recorded in Claudian was of a daylight observation of Venus.</p>
60	396?	<p>St. Augustine, <i>De Urbis Excidio</i> 6.7: <i>visa est ignea nubes ab oriente, primo parva, deinde paulatim ut accedebat super civitatem ita crescebat, donec toti urbi ignis terribiliter immineret. videbatur horrenda flamma pendere, nec odor sulphuris deerat</i> (“a fiery cloud was seen in the east, small at first, then gradually as it came over the city it grew until the fire hung over the city in a terrible manner; a horrendous flame seemed to hang down, and there was a smell of sulphur”). St. Augustine was a contemporary of this event. Count Baronius dates the event to A.D. 396; it must belong to that general period but there do not seem to be any grounds for placing it in that precise year.</p> <p>Ho [182] reports a comet that rose between July 22 and August 19 in A.D. 396.</p>
61	400	<p>Philostorgius, <i>Ecclesiastical History</i> 11.7: <i>καὶ ταύτην ἄρα καὶ τὸν ξιφίαν σημαίνειν ἀστέρα</i> (“and the sword-shaped star predicted [this disaster]”).</p> <p>Socrates, <i>Ecclesiastical History</i> 8.4: <i>τοσοῦτος δὲ ἦν ὁ ἐπικρεμασθεὶς τῇ πόλει κίνδυνος, ὥς καὶ κομήτην μέγιστον ἐκ τοῦ οὐρανοῦ καὶ μέχρι τῆς γῆς διήκοντα καὶ οἶον οὐδεὶς θεάσατο πρότερον μνηνεῖν αὐτόν</i> (“such was the size of the danger hanging over the city that a very large comet stretching from the sky to the ground, such as no-one had seen, predicted it”).</p>

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62	A.D.	<p>Sozomenes, <i>Ecclesiastical History</i> 8.4: ἡνίκα δὴ ταύτην τὴν ἐπιβουλήν προεμήνυσε κομήτης, ἐπὶ τῆς πόλεως φανείς μέγιστος, ἐς αὐτὴν σχεδὸν τὴν γῆν διήκων, καὶ οἷος πρότερον οὐ γεγενῆσθαι λέγεται (“a comet gave prior indication of this plot, a very large comet that appeared over the city, extending almost to the earth and reputedly of unprecedented appearance”). Socrates and Philostorgius are contemporaries of the event; Sozomenes usually draws heavily on Socrates.</p> <p>Ho [183–4] reports two comets for this year, (i) one rising on March 19, (ii) the other in September.</p>
	402	<p>Claudian, <i>Gothic War</i> 244–8: <i>qui primum roseo Phoebi prolatus ab ortu ... donec in exiguum moriens vanesceret ignem</i> (“a comet that brought forth from the rosy birth of Phoebus ... until with its dying the flames grew smaller and smaller and it vanished”). This is one of the omens of Stilicho’s victory.</p> <p>Ho [186] reports a comet that rose between November 11 and December 10.</p>